

1. A photonic cell comprising:

5           a plurality of member nodes, each member node within optical reach from the  
base node.

10

15

5. An optical network comprising;

20

a plurality of member nodes, each member node within optical reach from the base node.

13882ROUS01U

6. An optical network as claimed in Claim 5 wherein each photonic cell overlaps at least one node with at least two other photonic cells.
7. An optical network as claimed in Claim 6 wherein each node in an overlap between two photonic cells includes optical regeneration.
8. An optical network as claimed in Claim 7 wherein the optical regeneration includes optical-electrical-optical conversion.
9. An optical network as claimed in Claim 7 wherein the optical regeneration includes wavelength conversion.